

Tällberg 2013 Invited Initiative Meeting
Navigating New Risk Landscapes & Opportunities in Global Food Systems

June 11th – 13th, 2013, Tällberg Sweden at the Villa Långbers Hotel

Meeting organized by Molly Jahn (UW – Madison), Aled Jones (Anglia Ruskin University) and the Marc Levy (Earth Institute, Columbia University)

Sponsored by the Center for Integrated Modeling of Sustainable Agriculture and Nutritional Security, the International Life Sciences Institute, the World Bank and the University of Wisconsin - Madison

In conjunction with the Tällberg Forum 2013, The Knowledge Systems for Sustainability Collaborative has been chosen as an "Invited Initiative" to host a small invitation-only meeting from 11-13 June immediately preceding the full Tällberg Forum 13-15 June 2013. This meeting will bring together about 40 global leaders from business, academia, government, multilateral international organizations, and civil society to map out and align in pre-competitive space various large-scale efforts relevant to more dynamic and integrated reflections of systemic risks at various scales in agriculture and food systems. We will highlight and intend to extend exemplary private/private, public/private and public/public collaborations with respect to the sharing of information, analytics, opportunities and risks related to humanity's sustainable provisioning at the land/water/energy nexus. Our intent is to leverage existing frontier initiatives and efforts to focus on innovative platforms and strategies that promote alignment, sharing and integration of data, information and knowledge assets where partners see mutual benefit toward prospective approaches to quantifying risk in agricultural and food systems, improved decision-making under uncertainty, and opportunities to realize improved livelihoods and other outcomes from provisioning within long term limits at the land/water/energy nexus.

Objectives

- Improve clarity on the boundaries, structure, and mechanisms to facilitate maturation and curation of pre-competitive space related to sustainability and nutritional security of the world's food systems. *Build consensus blueprints of shared space and specific cross-boundary collaborative agreements* in pre-competitive space anchored in government, bi- and multi-lateral public and private frameworks to better describe benefits from investments in improved productivity, improved ability to meet short and longer term provisioning demands, and to better inform responses to

markets, humanitarian needs and resource management challenges. Set near term steps related to upcoming opportunities in national and multilateral global fora.

- *Map out, align and bundle current large-scale efforts* relevant to more dynamic and integrated reflections of systemic risks at various scales in in provisioning from the land / water/ energy nexus.
- *Highlight exemplary collaborations* (private-private, public-private and public-public) with respect to the sharing of information, analytics, opportunities and risks related to humanity's provisioning demands improved food, energy, climate and water security within sustainable natural resource limits.
- Leverage frontier efforts to *elaborate innovative platforms and prospective strategies and approaches* that promote alignment, sharing and integration of data, information and knowledge assets where partners can realize mutual benefit for quantifying risk in agricultural and food systems, improving decision-making under uncertainty, and achieving improved livelihoods and improving food, energy, climate and water security within sustainable natural resource limits. This includes developing and using more diverse, comprehensive, and integrated knowledge systems for decision making.

Meeting Agenda for Tuesday, June 11-Thursday, June 13 - All meeting sessions will be held at the Villa Långbers Hotel, Tällberg, Sweden, roles are suggested subject to change

OPTIONAL Monday 10 June 2013 (for participants arriving early)

Time	Topic	Lead / Location
18:30	<i>Dinner</i>	Villa Långbers Dining Room

Tuesday 11 June 2013

Time	Topic	Lead / Location
	Arrivals through the day, pre-meeting conferences	
7:00-9:00	<i>Breakfast</i>	Villa Långbers Dining Room
12:00	<i>Lunch</i>	Villa Långbers Dining Room
15:30-17:00	<i>Gather for refreshments</i>	
17:00-18:30	Welcome from meeting organizers and sponsors, Meeting orientation and overview, introductions and review in community of meeting agenda, goals and strategy; review principles of engagement	Molly Jahn Dave Gustafson, Marc Sadler, Aled Jones, Marc Levy, Rebecca Oliver, Ilan Chabay
18:30-20:00	<i>Dinner</i>	Villa Långbers Dining Room
20:00-21:00	After dinner talk and facilitated discussion Title: Visualizing the World Food System: A Call to Action	Marc Sadler & Gavin Maguire; Moderator John Antle

Wednesday 12 June 2013

Time	Topic	Lead / Location
7:30-8:30	<i>Breakfast</i>	Villa Långbers Dining Room
	<p>Session 1 Partnerships and parables: Exploring “Layers” as components of Knowledge Systems for Risk Mitigation and Sustainable Provisioning at the Land/Water/Energy Nexus</p> <p>The goal of this session is to set up an ordered approach to better understand patterns and dynamics in agriculture and world food systems in order to better steer them toward the types of emergent properties we want. We will use the metaphor of “layers” of information. "Layers" are not simply collections of data and information that cover key physical data. "Information layers" in this sense:</p> <ul style="list-style-type: none"> + are spatially specific enough to make visible the dynamics and the patterns at the scales at which they unfold. + have a sufficient temporal dimension to bring into focus change at the pace that matters scientifically, socially and politically. + characterize the most important drivers of change within a layer, in other layers, and the most important consequences of pressure between layers. + are denominated in ways that allow within- and cross-layer connections to be articulated explicitly, layer-to-layer. + are capable of representing the past, present and future. + have clear lines of sight to human behavior and choice, either through a dimension within the layer that has a clear connection directly, or through cross-layer linkages yielding indirect connections. 	<p>Session Chairs: Tony Janetos & Mike Grundy</p> <p>Session orientation: Mike Grundy and Tony Janetos</p> <p>In community we will explore the extent to which next phases and commitments of existing activities can be aligned in pre-competitive/public space and leverage innovative approaches to private/private, private/public and public/public partnerships. Organizations and institutions with commitments to demographic, agricultural and natural resource monitoring, earth observations, agricultural productivity and performance, relevant infrastructure, and outcomes in human dimensions related to agriculture and food systems will describe their structure, existing and planned commitments.</p> <p><i>Specific topics include:</i> Genomics and systems biology as templates for integrated information systems</p> <p>Sample "layers" in food systems to be represented by participants</p> <p>How do these layers translate into sustainability indicators of demonstrated value for navigating risk landscapes in food systems?</p>

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8:30-8:40	Welcome Introduction to Session 1	Tony Janetos
8:40-9:00	Framing remarks and introduction of the metaphor of domain "layers"	Tony Janetos
9:00-9:15	An example of "demand" as illustrated by the knowledge track in the UN Global Compact Sustainable Agriculture Business Principles	Puvan Selvanathan
9:15-9:30	A parable: Genomics and systems biology as templates for integrated information systems	Steve Goff
9:30-9:40	Charge question presented to the group: Can we agree on the metaphor of "layers" as a way to organize shared space related to risk, resilience and opportunity in global food systems?	Mike Grundy
9:40- 10:30	Breakout tables for individual layer discussions Breakout questions: (1) Does this particular layer work (2) What is the state of science, engineering and governance in this layer related to: a. Data	Participants will assort by interest Proposed groups (Leader denoted in parentheses): Soils and Landscapes (Grundy) Capacity for participatory processes (Chabay & Arvai) Population and Demographics (Levy & Bhaduri) Depictions of risk in human and environmental

	<p>b. Modeling c. Decision sciences, governance, participatory processes & user interfaces</p> <p>(3) What are the major gaps that remain in this “layer” (4) How do these layers translate into sustainability indicators of demonstrated value for navigating risk landscapes in food systems?</p> <p>Group will select rapporteur who will summarize the conversation from each group, and the summary from each group will be included in the meeting summary</p>	<p>dimensions in global food systems (Sadler & Douglas, possibly Bridgett-Jones, Scholes) Water (Noble) Surface weather and Climate (Hoogenboom) Agricultural production and land use (Justice & Ingram)</p> <p>Greg Fienhold will assist with a focus on funding plans</p>
10:30- 10:45	BREAK	
10:45-11:45	<p>Panel discussion: Building and linking layers: private sector perspectives (10min each + 20min discussion)</p>	<p>Tony Janetos Susana Crespo (ESRI) Tracy Morgan (MACE) Gavin Maguire (Thomson Reuters)</p>
11:45-12:00	Session Summary	Tony Janetos
12:00-13:30	<p>Lunch with structured discussion of ways in which we can repoint our analytical gaze to nearer term phenomena in relevant systems shedding light on big new risks that are emerging in ways that could foster cascades of sustainability or otherwise</p>	<p>Yaneer Bar-Yam Ilan Chabay</p>
13:30-14:00	BREAK	
	<p>Session 2: Navigating New Risk Landscapes & Opportunities in Global Food Systems</p> <p>Food systems, natural resource degradation and climate change offer a series of systemic risks that could impact every organization in the world. Some organizations will be more immediately impacted than others. This session is intended to highlight how decision-making is currently</p>	<p>Session Chairs: Aled Jones and Joe Arvai</p>

	undertaken at the strategic level within organizations and how well systemic risk is handled. We will explore what level of understanding or knowledge (of the risk) is required to allow better decision making. Systemic risk at economic scales will be explored. What alternatives exist in terms of decision-aiding approaches, methods for incorporating uncertainty around risk and benefit estimates, analytic-deliberative processes, and practices and examples of integrated knowledge systems? What methods exist for assessing which information assets related to decision makers' objectives and measurement criteria are highest priority for reflections of systemic food security, financial, climate and environmental risk?	
14:00 – 14:05	Introduction to session	Aled Jones
14:05 – 14:20	Decision making in the face of risk <i>What do the decision sciences tell us about how to improve the quality of decision-making under risk and uncertainty?</i>	Joe Arvai
14:20 – 14:30	Defense, environment and risks: Tools used in defense to help understand risk as a tool that should be more widely adopted when faced with systemic risk	Louise Simonsson
14:30-14:45	Actuarial models and risk Actuarial model and methods to understand tail risk within the finance sector	Nick Silver
14:45-15:00	Panel (of the speakers) to respond to Q&A from the audience.	
15:00-16:00	Roundtable discussions: Questions will be posed to the group to reflect on during their discussions: In your view, are systemic and emerging risks currently	

	handled adequately? What formal processes or tools and methodologies are used to assess risk? What expertise is needed to manage these risks? At what level of abstraction is knowledge of risk required to influence decisions? We will ask each table to provide a personal reflection on the types of data useful to better assess risks and data that are missing.	
16:00- 16:30	BREAK	
16:30 – 17:00	Roundtable report back: Each table is asked to report back in plenary on their discussions. Key points and further questions raised.	
17:00-17:30	Synthesis: Day 1, Thought charges for Day 2	Ilan Chabay
17:30-20:00	<i>Dinner</i>	

Thursday 13 June 2013

Time	Topic	Lead / Location
7:30-8:30	<i>Breakfast</i>	Villa Långbers Dining Room

	<p>Session 3: From Concepts to Action: Developing practical ways to foster data integration and collaboration to support risk management in Global Food Systems</p> <p>Opportunities for innovation toward definite optimism in global food systems; the roles of data and information, community processes, financial and agricultural/food interests, earth observations, actuarial sciences and others and improved reflections of risk and prospective opportunity in spurring innovation in brokered public/private; next steps on "layer" construction especially soils, water; opportunity to use existing global fora and planned events to showcase private sector commitment to shared precompetitive space; funding strategies for large scale construction of knowledge systems</p>	Session Chairs: Marc Sadler & Rowan Douglas
8:30 – 8:40	Introduction of session purpose, meeting conclusion	Ilan Chabay
8:40-9:00	Perspectives on agriculture, food and natural resource risk mitigation in the 21 st century	Rowan Douglas
9:00-9:20	Resilience thru agriculture and risk mitigation	Sundaa Bridgett-Jones
9:20-10:00	<p>Scoping precompetitive space related to risk in global food systems (10 minutes talks + 20 minute discussion) Dave Gustafson (CIMSANS / AgMIP / IMPACT) David Newman (Innovations in solid waste)</p>	Marc Sadler
10:00-10:20	BREAK	
10:20-11:10	<p>Collaborating across boundaries: Leveraging the concepts of “layers” and “cases” (10 minutes talks + 20 minute discussion) Martin Keller (Environmental Intelligence & US</p>	

	Government) Len Hirsch (US GEO & Food security) Mike Grundy (Landscapes initiatives)	
11:10-11:30	Reflections and discussion on next steps in building knowledge systems for sustainability as a community of practice	Bob Scholes and Ilan Chabay
11:30-13:00	Meeting conclusions, sealing deals and ways forward; Review of calendar of key upcoming events & opportunities	
13:00-14:00	<i>Lunch</i>	
16:00	For any who are staying for the entirely separate larger meeting in the same site, the full Tällberg Forum begins (and runs through 15 June)	

Tällberg 2013 Invited Initiative Meeting
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Attendee list

First Name	Last Name	Institution
John	Antle	Oregon State University & AgMIP
Joe	Arvai	University of Calgary
Yaneer	Bar-Yam	New England Complex Systems Institute
Tim	Benton	UK Food Security Champion & University of Leeds
Budhu	Bhaduri	US Dept of Energy Oak Ridge National Lab
Sundaa	Bridgett Jones	Rockefeller Foundation
Ilan	Chabay	(Facilitation team) Institute for Advanced Sustainability Studies, Potsdam University of Stuttgart, Germany
Susana	Crespo	ESRI
Rowan	Douglas	Willis Re
Gregory	Fienhold	Columbia University's Earth Institute
Steve	Goff	US NSF iPlant Collaborative
Mike	Grundy	<i>Commonwealth Scientific and Industrial Research Organisation (CSIRO) & GlobalSoilMap</i>
Dave	Gustafson	International Life Sciences Institute Research Foundation - Center for Integrated Modeling of Sustainable Agriculture & Nutrition Security
Jonathan	Halperin	Designing Sustainability
Len	Hirsch	Smithsonian Institution & US Group on Earth Observations
Gerrit	Hoogenboom	Washington State University & AgMIP
John	Ingram	University of Oxford
Molly	Jahn	(Meeting Organizer) University of Wisconsin - Madison
Tony	Janetos	Boston University
Aled	Jones	(Meeting organizer) Anglia Ruskin University
Chris	Justice	University of Maryland & GEOGLAM
Martin	Keller	US Dept of Energy Oak Ridge National Lab
Marc	Levy	(Meeting organizer) Columbia University's Earth Institute
David	LeZaks	(Managing Scientist, Knowledge Systems for Sustainability) University of Wisconsin - Madison
Gavin	Maguire	Thomson Reuters
Tracy	Morgan	Multi Agency Collaboration Environment
David	Newman	International Solid Waste Association
Deb	Niemeier	University of California - Davis
Andrew	Noble	CGIAR (Water Lands and Ecosystems CRP, International Water Management Inst.)
Cheryl	Porter	University of Florida & AgMIP
Wendell	Porter	University of Florida
Marc	Sadler	World Bank
Bob	Scholes	Council for Scientific and Industrial Research
Puvan	Selvanathan	United Nations Global Compact

Nick	Silver	Callund Consulting Limited/ Global Sustainability Institute at Anglia Ruskin University
Louise	Simonsson	Swedish Defense Research Agency
Thilo	Wiertz	(Facilitation team) Institute for Advanced Sustainability Studies, Potsdam
Erik	Willen	Metria / European Space Agency